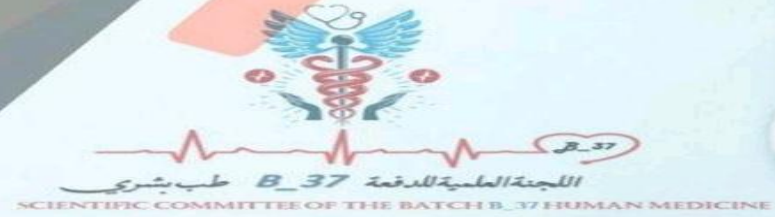


جامعة صنعاء

كلية الطب والعلوم الصحية

دفعة 37 طب بشري



DERMATOLOGY

<https://t.me/dermatology37B>

رؤساء اللجنة العلمية دفعة 37B :

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✓ زورة محمد البواب

✓ نور احمد الزبيدي

📌 **النقص فينا باقي، والكمال بالمشاركة والتعاون.**
في حال وجود أي خطأ أو تعديل، يرجى ارساله إلى بوت اللجنة العلمية:-

@scientificGroup37Bbot

Hair Disorder

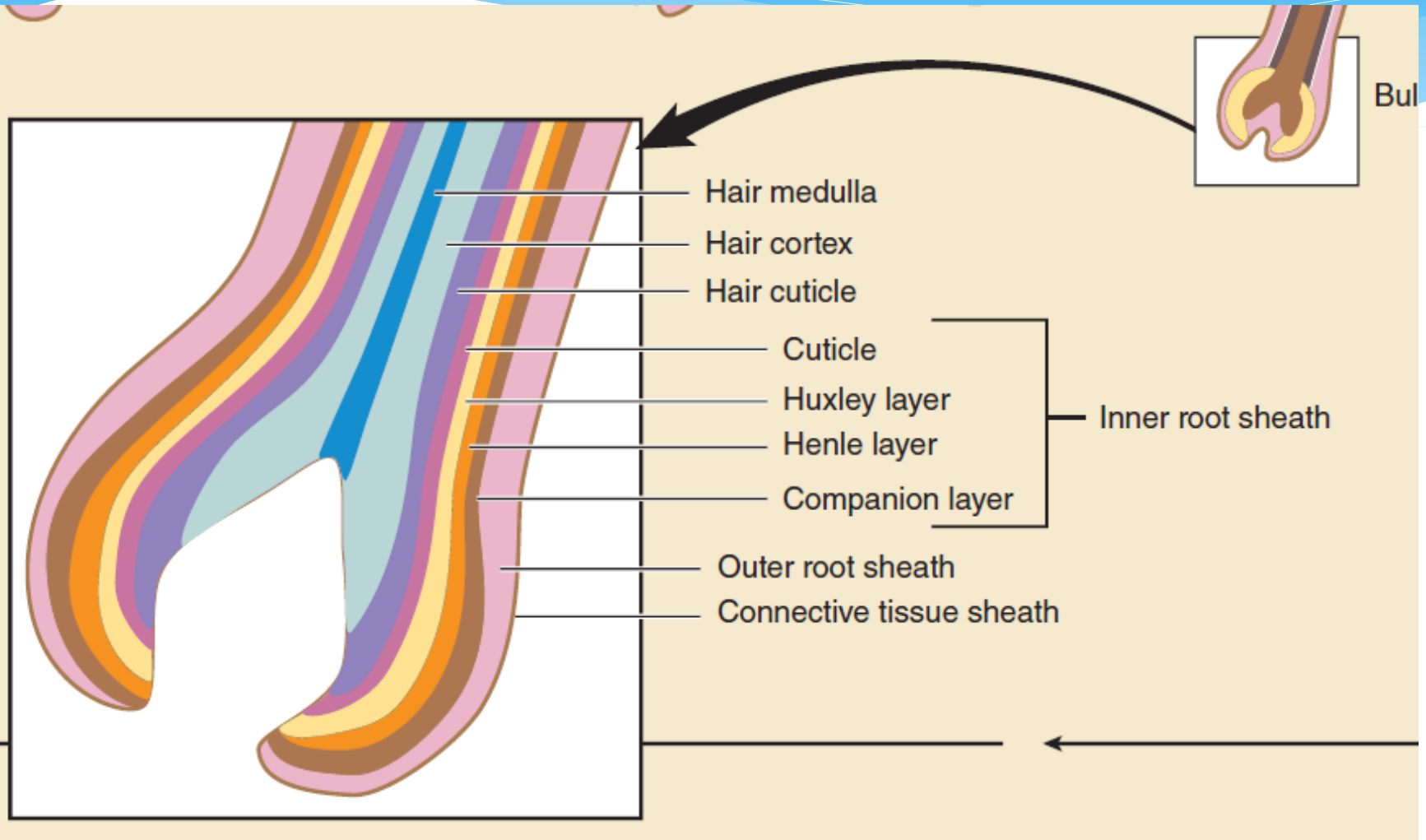
ASST. PROF. AL-MURIESH MAHER, MBBS, MSc, M.D

Scope of the lecture

❖ Hair anatomy

- * Outline the definition alopecia
- * Clinical approach to alopecia
- * Alopecia (non cicatricial)
- * Alopecia (cicatricial)
- * Review of hypertrichosis.
- * Summarize the treatment options for hypertrichosis.
- * Hirsutism
- * Treatment of Hrsutism

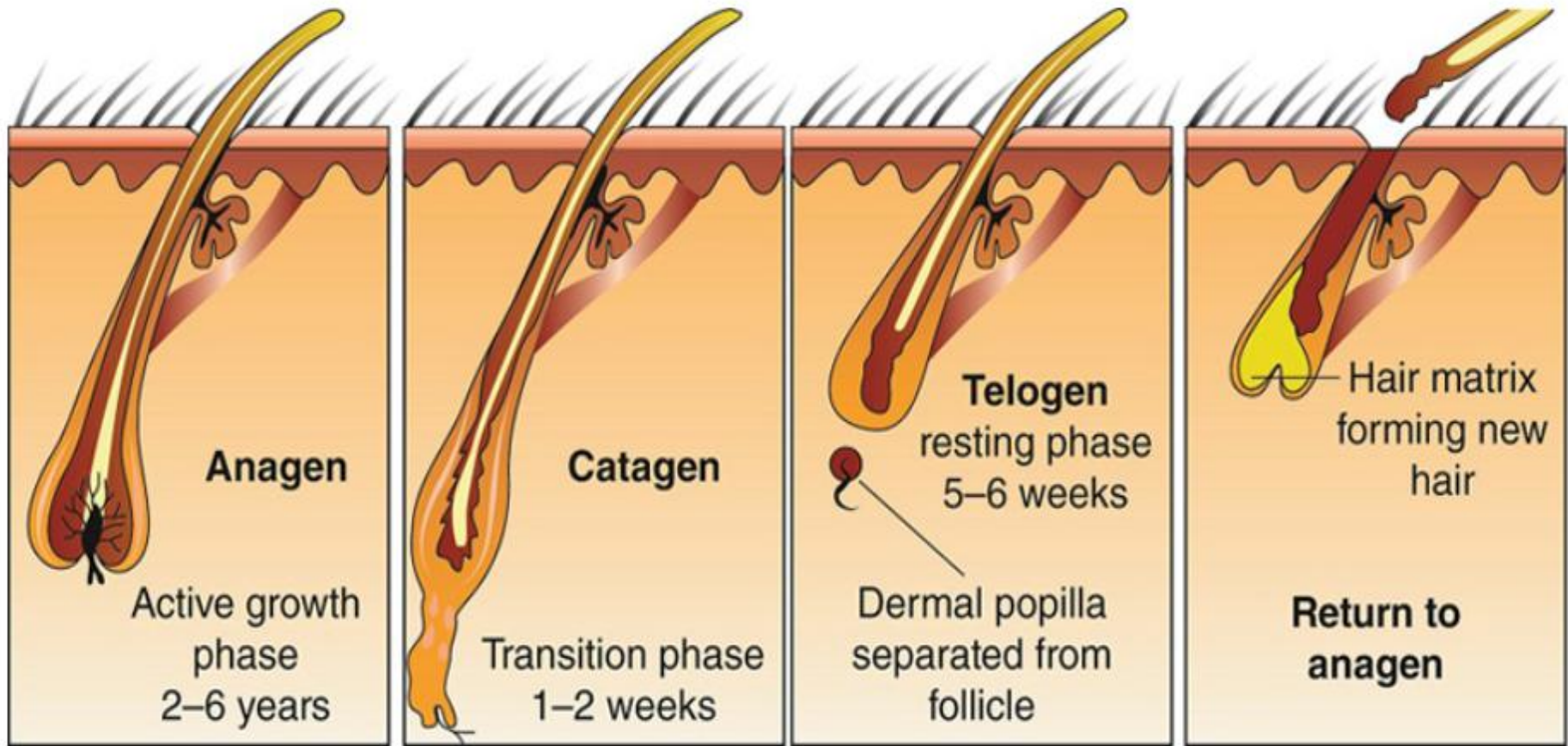
hair anatomy



Alopecia

- * The term alopecia means hair loss regardless of the cause
- * Hundreds of thousands of hair on the head.
- * The hair cycle consists of three phases:

the growth phase	(anagen)
the resting phase	(catagen)
the shedding phase	(telogen)



Natural growth and fall cycles of scalp hair.

Note: Anagen active growth phase from 2-6 years. This means that the person whose hair grows quickly has anagen (4-6 years) but the person whose hair doesn't grow quickly has a short anagen Catagen (transition phase 1-2 weeks). Exogen (shedding phase) hair is shed from the scalp.

Alopecia

90% of hair are in the anagen phase and 10% in resting and shedding phases.

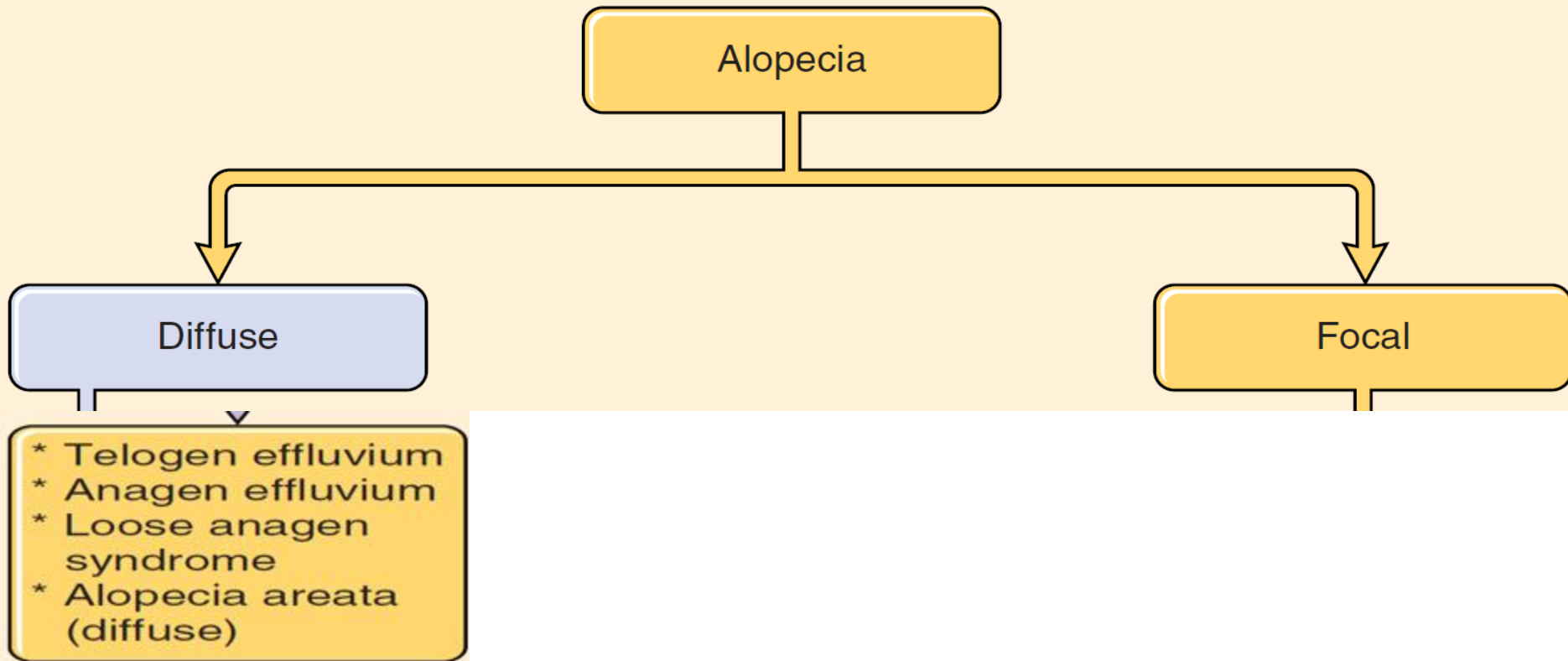
➤ Alopecia can be subdivided into two main subtype : **diffuse and focal**

Note:

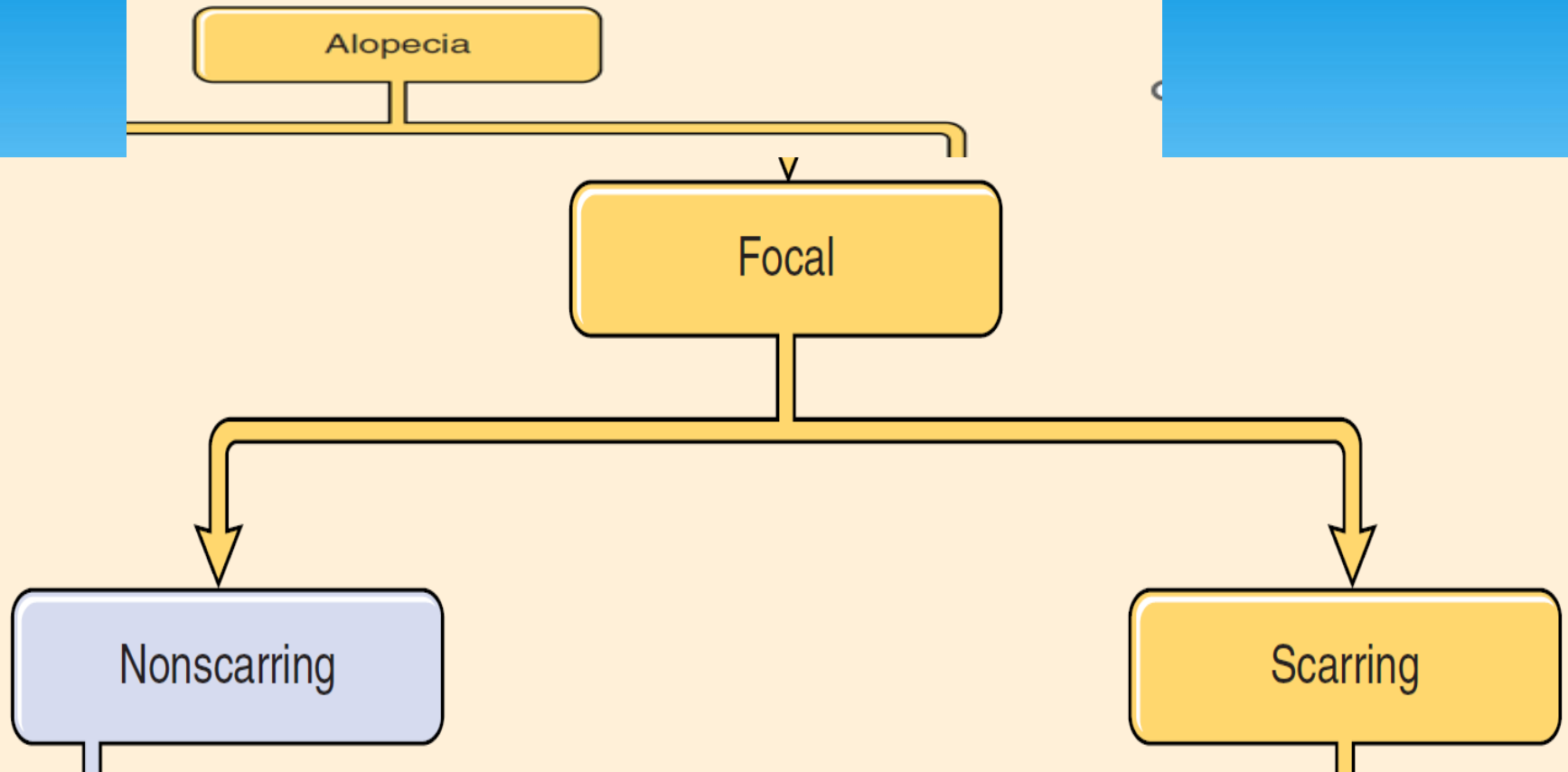
Normally, hair is 90% in anagen phase while 10% in other phases. But when a baby is born this is different, we find that huge parts of the hair are in telogen and resting phase. Then the hair all unites and changes to being 90% anagen and 10% others. Losing 70-100 hairs per day is normal.

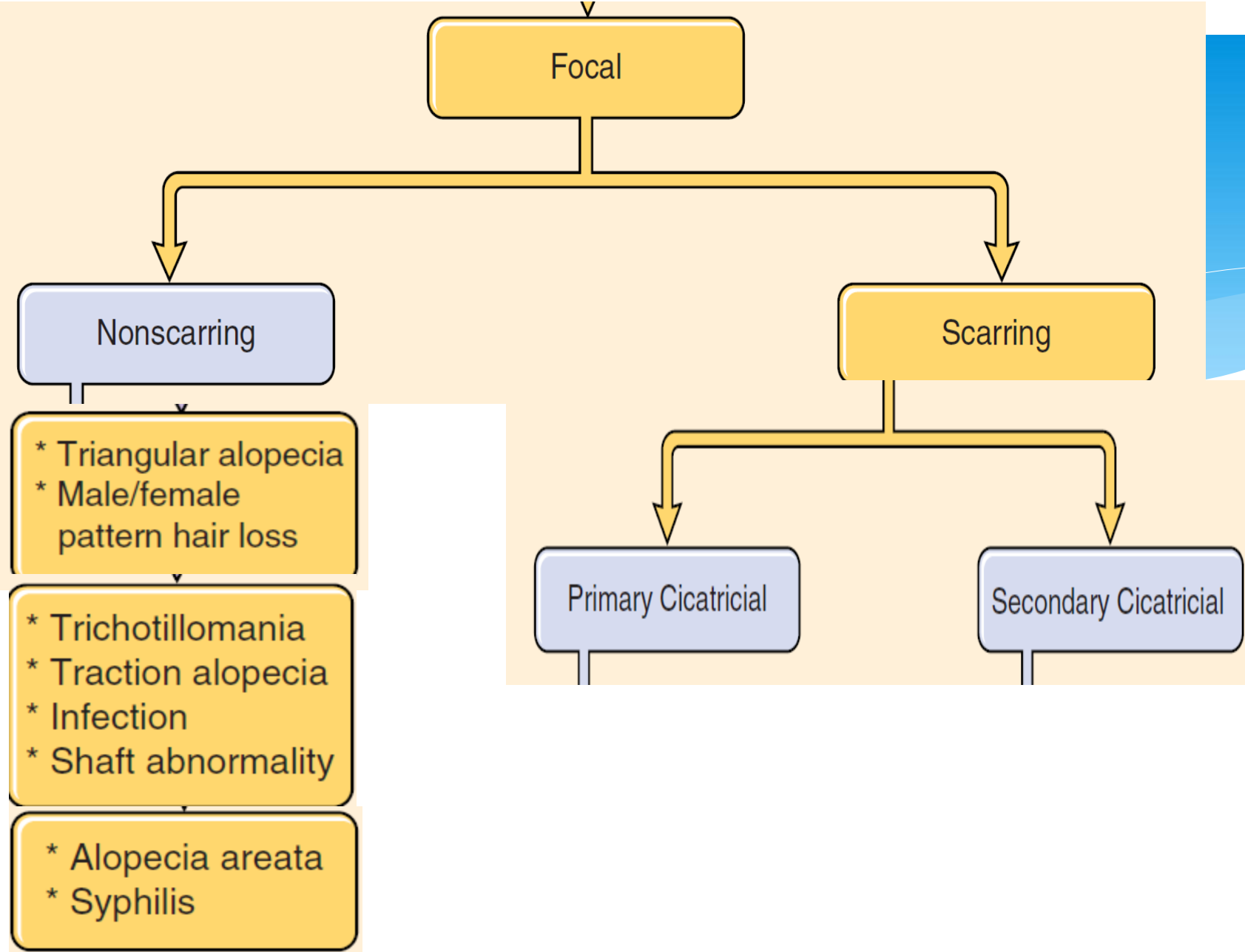
Alopecia subtype

Alopecia subtypes



Alopecia subtypes





Primary Cicatricial

- * Discoid lupus erythematosus
- * Lichen planopilaris/ Frontal fibrosing alopecia
- * Classic pseudopelade of Brocq
- * Central centrifugal cicatricial alopecia
- * Alopecia mucinosa
- * Keratosis follicularis spinulosa decalvans

- * Folliculitis decalvans
- * Dissecting folliculitis

- * Acne keloidalis nuchae
- * Acne necrotica
- * Erosive pustular dermatosis

Secondary Cicatricial

- * Traumatic injuries
- * Traction alopecia
- * Trichotillomania
- * Pressure alopecia



Additional Lecture Notes:

- The primary Cicatricle—a group of inflammatory irreversible hair loss disorder characterized by immune cell infiltrate . Due to the disease itself—destruction of the hair follicle.
 - The body attacks the hair follicles by WBCs or T-cells.
- Secondary Cicatricial—by stander—to a generalized destructive process within the skin, which ultimately destroys the hair follicles capacity for regeneration.



Clinical approach to alopecia

Note: Alopecia due to Telogen effluvium and Anagen effluvium is common.

CLINICAL APPROACH TO SCALP ALOPECIA

Majority of scalp
(diffuse)

Common:
Telogen effluvium
Anagen effluvium

Less common:
Lichen planopilaris, diffuse
Alopecia areata, diffuse
Female pattern hair loss

Patterned

Widened part line(s)

Female pattern hair loss (Christmas tree pattern)
Traction alopecia

Frontal / Temporal



Common:
Male pattern hair loss (bitemporal)
Traction alopecia*
Less common:
Frontal fibrosing alopecia
Hyperandrogenism in women

Vertex / Midline



Male pattern hair loss
Female pattern hair loss
Central centrifugal cicatricial alopecia (primarily women of African descent)

Posterolateral

Alopecia areata (ophiasis)

Occipital

Pressure (postoperative) alopecia

Circumscribed and
non-scarring

Alopecia areata (limited patch)
Tinea capitis*
Trichotillomania
Secondary syphilis
Pressure (postoperative) alopecia

Circumscribed
and scarring

Inflammatory

Central centrifugal cicatricial alopecia
Lichen planopilaris (LPP)
Frontal fibrosing alopecia
Discoid lupus erythematosus (DLE)
Folliculitis decalvans
Dissecting cellulitis
Acne keloidalis

Non-inflammatory

Brocq's alopecia (non-inflammatory end-stage of LPP > DLE or folliculitis decalvans)

*if chronic or severe, can become scarring

Clinical approach to scalp Alopecia

Additional Lecture Notes:

1. Diffuse—common by telogen and anagen effluvium, LESS common by Alopecia Areata.
2. Patterned:
 - a. Widened part line
 - b. Frontal/temporal
 - c. Vertex
 - d. Posterolateral
 - e. Occipital
3. Circumscribed and non-scarring. If Tinea Capitis with inflammation a scar is formed, if it's not with inflammation the scar doesn't form.

diagnostic test for alopecia

Hair pull test: grasping 40–60 closely grouped hairs and applying gentle traction

Positive when more than 10% of hairs are easily pulled out.

Trichoscopy: examination of the hair follicle, hair shaft, and scalp with a dermoscope

Skin biopsy



Note: the pt. remains without washing his hair for 24 hours, then the hair pull test is performed. This is used with Alopecia. Because it's the most common and has 3 stages .

Stage Of Alopecia Areate

1. Active stage: hair pull test more than 10% of hair are easily pulled out, takes 3 months or more to recover.
2. Stable stage takes less than 3 months to heal.
3. Regrowth stage—baby hairs are starting to grow. Takes less than 1 month with treatment to recover.

BEDSIDE DIAGNOSTIC TESTS FOR THE ASSESSMENT OF ALOPECIA

Gentle hair pull test



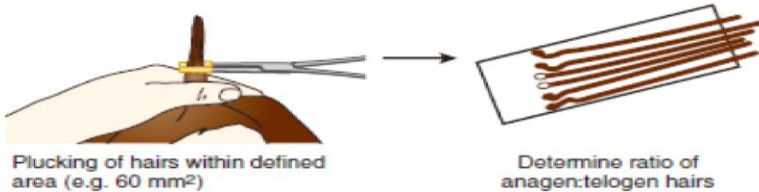
Hair not washed for 24 hours

"Tug" test



Assessment for hair shaft fragility

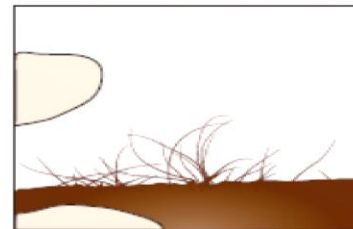
Unit area trichogram



Plucking of hairs within defined area (e.g. 60 mm²)

Determine ratio of anagen:telogen hairs

Hair card test



Assessment of hair ends (e.g. broken vs tapered), diameters, and growth

Trichoscopy



Visualization of hair shafts, follicular openings, and interfollicular skin (10x; see Fig. 69.7)

Computerized trichometric analysis



In addition to trichoscopy (50x), measures and records density/cm² and average hair shaft diameters

Note: The most important tests are Dermoscopy (Trichoscopy), hair pulling test.

□ Alopecia, nonscarring

➤ Diffuse

1. telogen effluvium:

- Hair shedding, acute onset
- Reactive process response to physical event (surgery, high fever, thyroid disease, iron deficiency),
- medication, severe mental or emotional stress

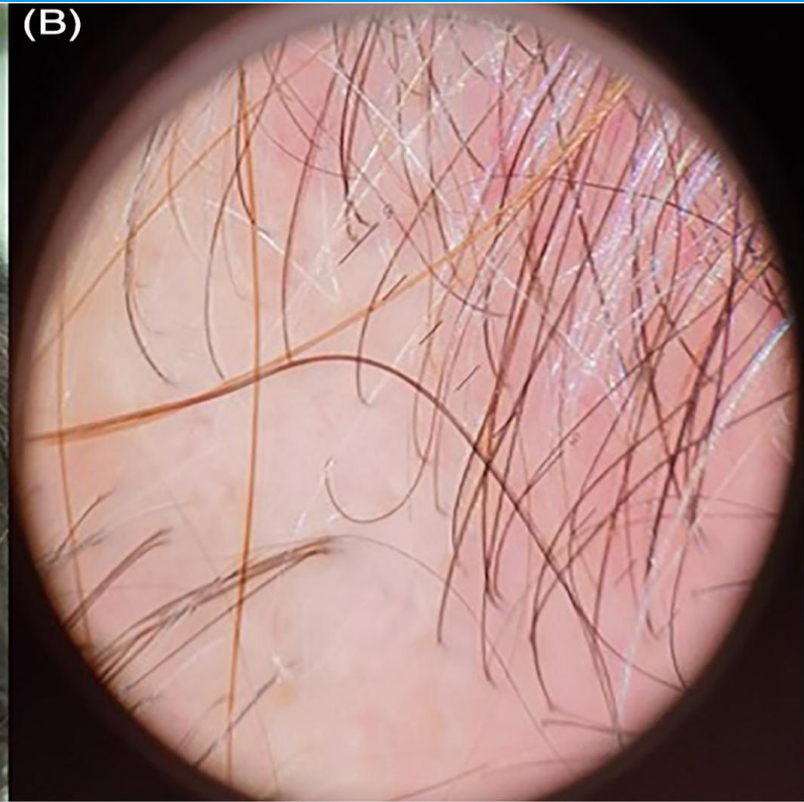
Note: Telogen Effluvium—happens after physical event such as a surgery or pregnancy. There is acute and chronic, but the acute is more common.



Figure 86-1 Chronic diffuse telogen hair loss due to Hashimoto disease.



Figure 86-4 Acute telogen effluvium triggered by the administration of warfarin.



- Large number of hairs shift from anagen to telogen
- Positive pull test: more than 6 telogen hairs

Treatment

Telogen
effluvium
is self-
correcting

- Recommendations include:
- Gentle handling of the hair, avoiding over-vigorous combing, brushing and any type of scalp massage
- Treat any underlying scalp disorder or hormonal problem determined, if any
- Ensure a nutritious diet, with plenty of protein, fruit and vegetables.
- Correct any abnormality in thyroid function, or levels of iron, vitamin B12 and folic acid.



Prognosis: 6 months if inciting cause is reversed
Regrowing hairs with tapered or pointed hairs can
be seen in the recovery phase

□ Alopecia, nonscarring

➤ Diffuse

2. Loose anagen syndrome

- Fair-haired children with thin, sparse, hair; no need for haircuts; easily dislodgable hair
- Examination reveals sparse growth of thin, fine hair and diffuse or patchy alopecia

Figure 1: Short and sparse hair in a 5-year-old girl



Note: Loose Anagen Syndrome—the hair doesn't grow, so it doesn't require hair cut.

- Anagen hairs are easily and painlessly pulled from scalp
- **Diagnosis:** epilated hairs are predominantly in anagen phase;
- Hair mount shows distorted anagen bulb, ruffled cuticle
- **Improves with age**

□ Alopecia, nonscarring

➤ Diffuse

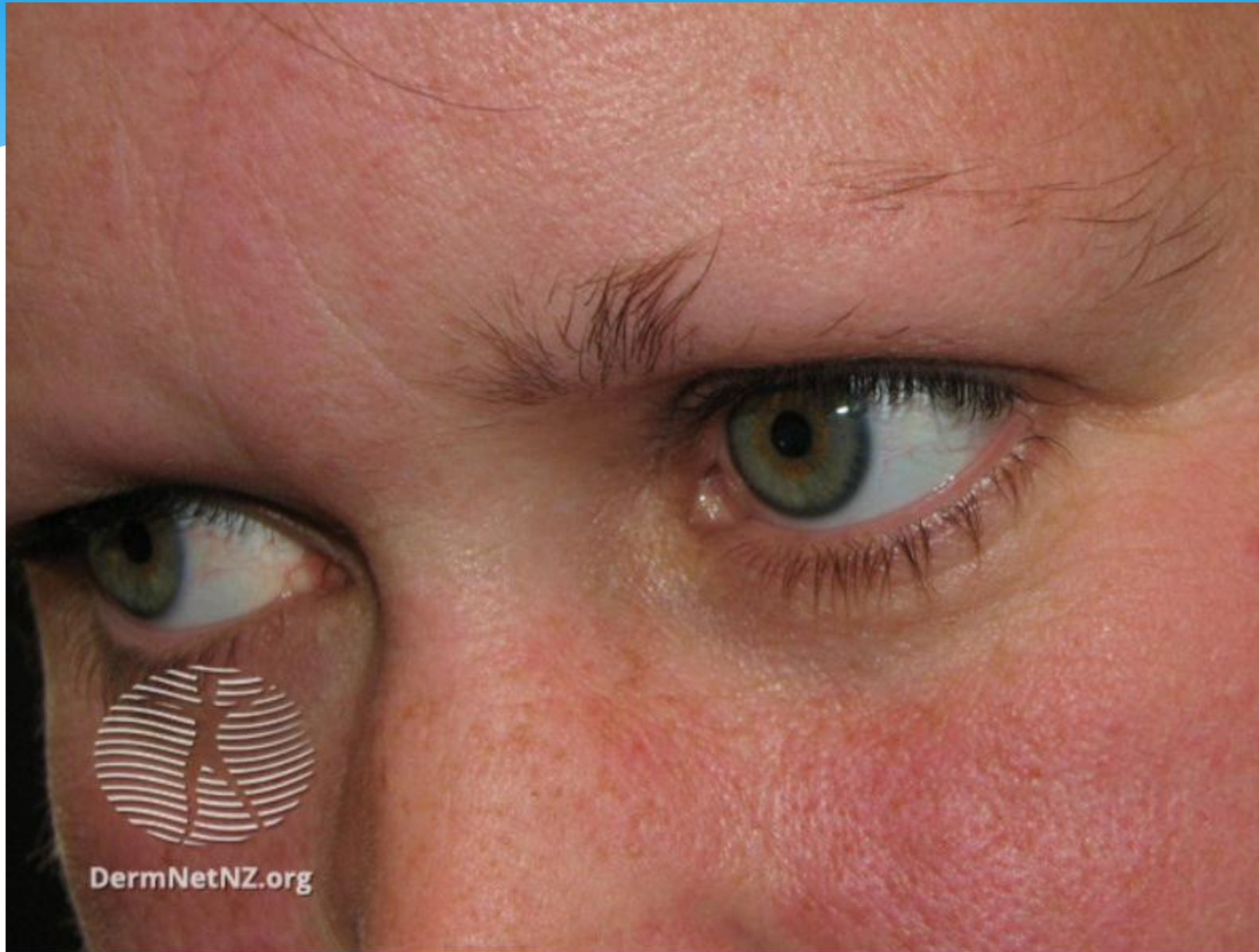
3. Anagen effluvium (aka anagen arrest)

- Hair broken off and not shed
- Radiation therapy and chemotherapy agents; occurs 2 to 4 weeks after treatment
- Hair shafts are abruptly thinned and break off at skin surface



Note; in case of chemotherapy—hair follicles are damaged, this is due to the drug being toxic for growth so it causes breakdown of hair and hair fall. But it is still within the period Anagen.

Telogen Effluvium—hair nutrition is stopped so that the body can prioritize and so nutrition stops and the hair turns from anagen to telogen and no hair fall.



- 
- Other causes: mercury intoxication, boric acid intoxication, thallium poisoning, colchicine, severe protein deficiency

Treatment

Anagen effluvium due to chemotherapy is expected to recover fully within 3–6 months of stopping it. The hair nearly always grows back normally, but sometimes patients with straight hair develop curly hair when it regrows. Hair color may also change.



Treatments for anagen effluvium include:

- Topical minoxidil solution
- Scalp cooling during chemotherapy
- Cosmetic camouflage to eyebrows

□ Alopecia, nonscarring

➤ Patchy



FIGURE 1-5 Patchy alopecia areata. (Used with permission from Dr. Paradi Mimirani.)

Abrupt onset

- Exclamation point hairs which are broken hairs that are tapered at the scalp
- Pigmented hair affected first, subsequently gray hair may also be targeted

Note: patch usually shows hair follicles opening, and should be clear. But in reality it differs because some people use herbal /chemical substances such as garlic and acid, so it forms scarring and inflammation and in diagnosis it may be mistaken with Tinea capitis. But Tinea Capitis can be distinguished by presence of black dots and scales, so we must ask the pt. if he'd used any substances before coming in to see us. So that we can correctly diagnose the pt. new hair's color may change. For example, a pt's hair changes color in his 50s or 60s and therefore the new hair may grow out as gray or black.



Hair pull test positive for telogen hairs when disease is active

Follicular damage in anagen; then rapid transformation into telogen

- **Alopecia totalis:** total scalp hair loss
- **Alopecia universalis:** total scalp and body hair loss
- **Ophiasis:** localized hair loss along the periphery of the scalp
- **Nails:** pitting, mottled lunula, trachyonychia, or onychomadesis

Note:

Ophiasis—is hard to treat.

Nail pitting—is not very deep such as Psoriasis.

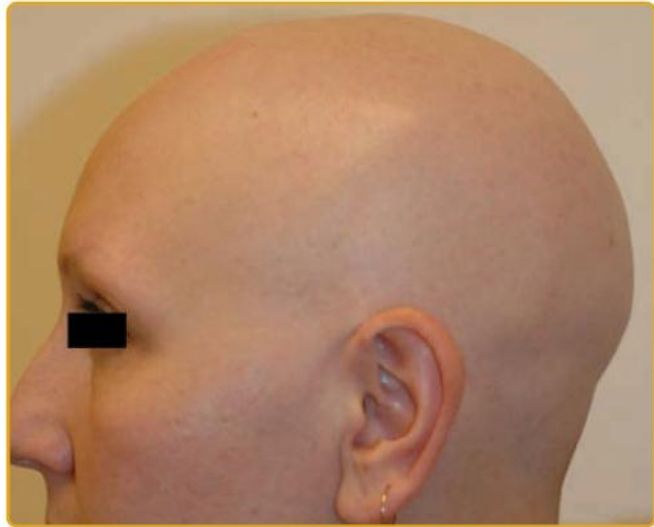


Figure 87-3 Patient with alopecia areata totalis.



- **Histology:** peribulbar infiltrate of T cells and macrophages (“swarm of bees”)
- **Associations:** In the patient: AD, thyroid disease, vitiligo. In the family: atopic disorders, thyroid disease, vitiligo, diabetes mellitus, pernicious anemia, SLE (other autoimmune conditions)

Note: Associations of Alopecia Areata—is more common with atopic disorders and thyroid disease.

Treatment

- **Patchy, or less than 50%:**
 - Intralesional corticosteroid injections
 - Topical treatments
 - Potent corticosteroid
 - Minoxidil solution
 - Anthralin (dithranol) cream or ointment

Note: Less than 50% treatment we can use corticosteroids but it's not very preferable because it may cause atrophy. We can use minoxidil but it's side effect hirsutism in females, hair begins to grow in unwanted regions.

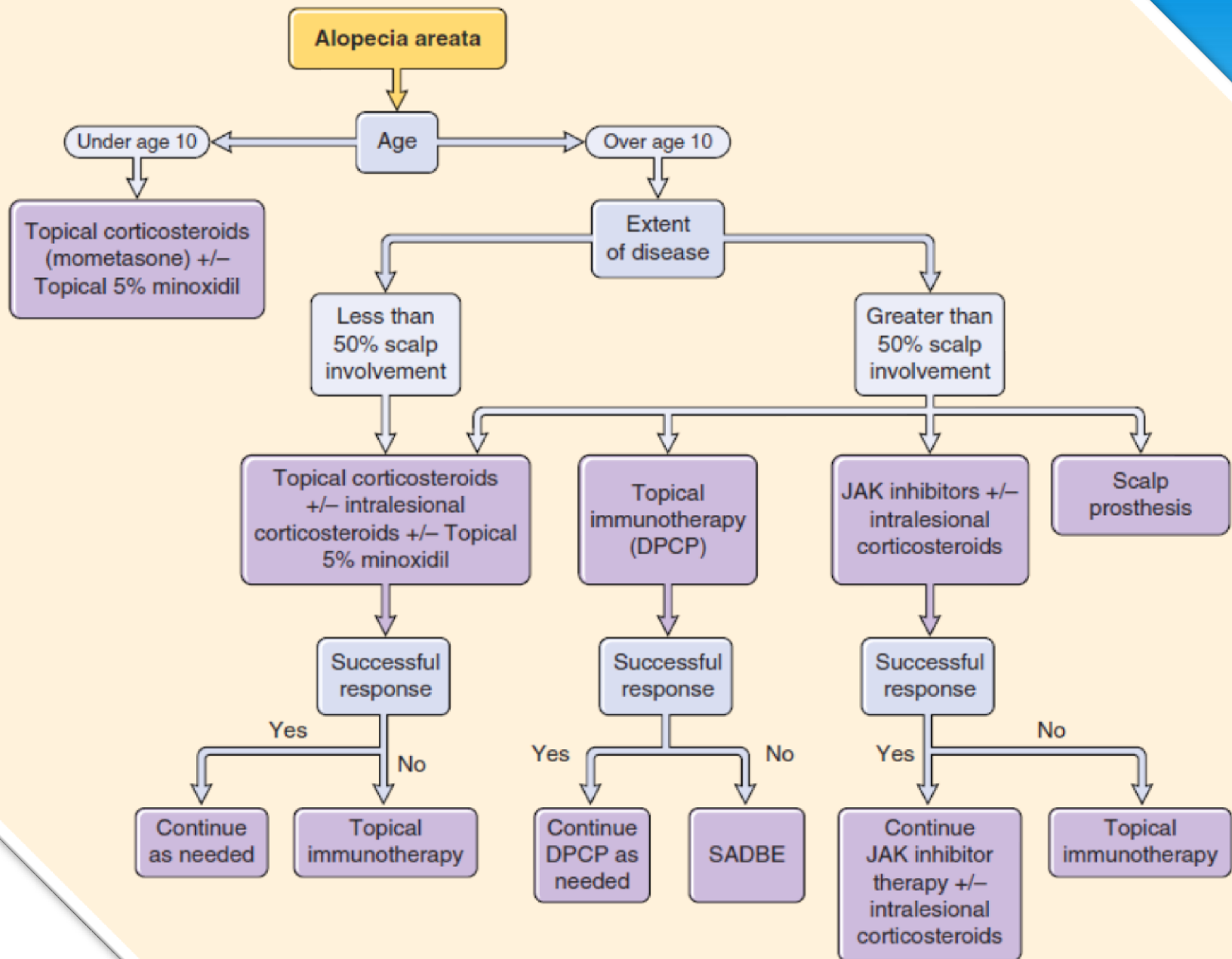
- greater than 50% scalp involvement
- topical immunotherapy (squaric acid dibutylester [SADBE] or diphenylcyclopropenone [DPCP]) **not really used**
- systemic cortisone **used a lot**
- Janus kinase (JAK) inhibitors—**new drug, but it may contain serious side effects which won't appear until years later.**

In June 2022, The FDA approved baricitinib use in severe alopecia areata.

Note: corticosteroids cause atrophy, therefore medication is stopped every 2-3 weeks to prevent any irreversible damage that may occur.

The doctor also mentioned we may be able to use laser for baldness.

Treatment algorithm for alopecia areata



□ Alopecia, nonscarring

➤ Patchy

2. Trichotillomania

- Impulse-control disorder
- Repeated plucking or pulling of hairs
- Confluence of short, sparse hairs within an otherwise normal area of the scalp
- Varying lengths of regrowth, “friar tuck” distribution of hair loss

Note: Psychological disease that may affect Qatt chewers, this can be distinguished by uneven hair growth. This usually occurred in the middle ages to the church fathers and his assistants.



FIGURE 1-8 Trichotillomania. (*Used with permission from Dr. David M. Minkovitz*)

- 
- Regrowing hair is blunt tipped instead of pointed
 - Eyebrows and upper eyelashes may be affected
 - Often have other habits: nail biting, skin picking
 - **Treatment:** psychological intervention and/or psychiatric medication to modify behavior

□ Alopecia, nonscarring

➤ Patchy

3. Traction alopecia

- Prolonged traction on the scalp by physical pressure: tight braids, foam rollers, tight pony tail, hair extensions

Notes: this is very common in Yemen, parents are advised to not braid their child's hairs to prevent frontal baldness.

- The “fringe sign” is characteristic of marginal traction alopecia: the hair along the frontal hairline is retained but is attenuated or finer in caliber. The area of alopecia is behind this “fringe”

Hair loss may be persistent if the traction is unrelenting



FIGURE 1-10 The “fringe sign” of traction alopecia involving the marginal hairline. (Used with permission from Dr. Paradi Mirmirani.)

□ Alopecia, nonscarring

■ Patchy

4. Triangular (temporal) alopecia.

- Triangular patch of vellus hairs or complete hair loss—either congenital or appear early in life

- Frontotemporal region

- Histology: vellus hairs

- No treatment, usually persistent. **Given hair implants.**



FIGURE 1-11 Triangular alopecia. (Used with permission from Dr. Adelaide Hebert.)

□ Alopecia, nonscarring

➤ Patterned

5. Androgenetic alopecia,

- Hereditary thinning in genetically susceptible men and women
- Circulating testosterone (T) is converted to dihydrotestosterone (DHT) by 5- α -reductase enzyme at the target tissue.
- DHT is the active androgen causing miniaturization of hairs in androgen-sensitive areas of scalp.

□ Alopecia, nonscarring

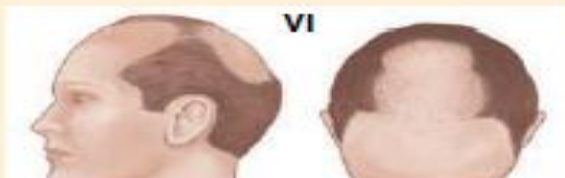
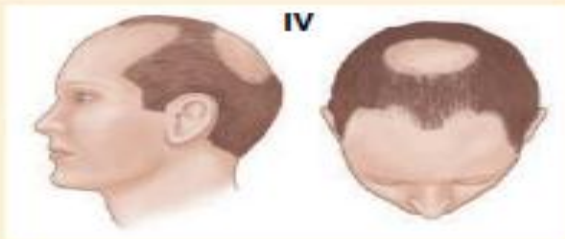
➤ Patterned

- In women there may be some additional nonandrogen signals that lead to thinning, especially during menopausal years
- Anagen is shorter; number of follicles remains the same.

Paradoxically DHT enlarges hair in androgensensitive areas (beard, chest)

- 
- **Male pattern:** potential areas of hair loss are the frontal, temporal, and vertex regions.

Hamilton-Norwood classification of male pattern hair loss



Note: hair transplantation is preferable for the hair to be like picture number 4 or 5 and this depends on it being androgenic or not.



Figure 85-2 Male-pattern androgenetic alopecia, grade III vertex according to the Hamilton-Norwood classification. Standardized global photography overview (Canfield system).

- 
- **Female pattern:** diffuse thinning in the midscalp, vertex, and temporal areas; frontal hairline is retained (Ludwig classification)
 - **Histology:** miniaturization increased vellus-to-terminal hair ratio, preserved sebaceous glands

Ludwig classification of female pattern hair loss



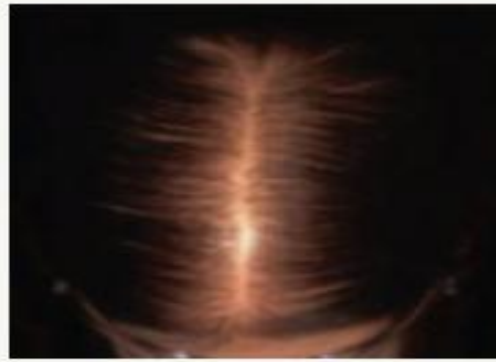
Figure 85-4 Ludwig pattern of hair loss (3-point scale). (Redrawn from Blume-Peytavi U, Blumeyer A, Tosti A, et al. S1 guideline for diagnostic evaluation in androgenetic alopecia in men, women and adolescents. *Br J Dermatol*. 2011;164[1]:5-15.)

Note: Hair loss in women starts from the midscalp. When hair loss is more than five years, the treatment is more difficult, and we can't return the follicle.

THE SINCLAIR SCALE FOR FEMALE PATTERN HAIR LOSS



Stage 1



Stage 2



Stage 3



Stage 4



Stage 5

Fig. 69.5 The Sinclair scale for female pattern hair loss. Stage 1 – normal; Stage 2 – widening of the central part line; Stage 3 – widening of the part line with translucency of the hairs at its border; Stage 4 – development of a bald area anteriorly along the part line; and Stage 5 – advanced hair loss.

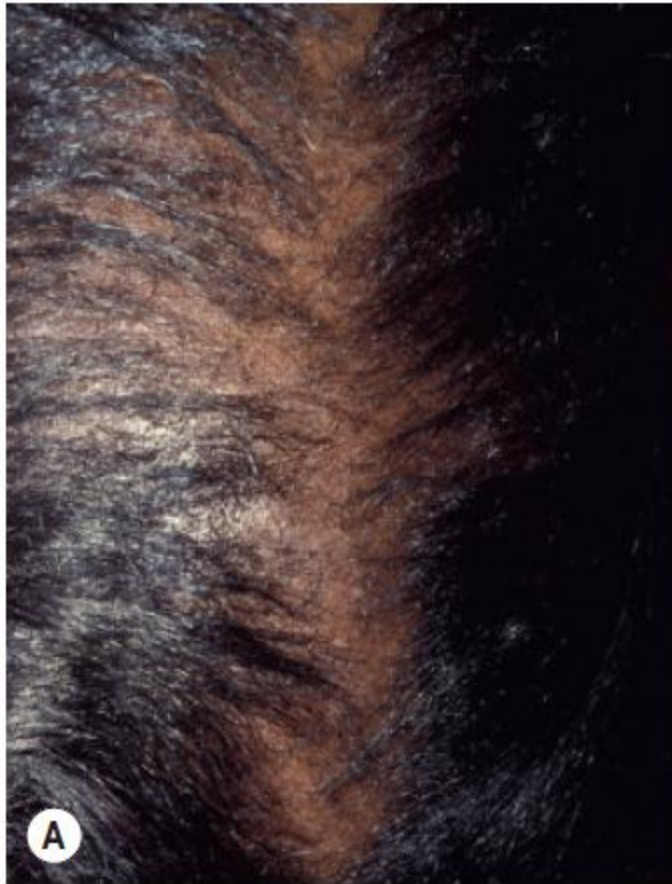


Fig. 69.6 Female androgenetic alopecia. Comparison of the part line on the crown (A) and the occiput (B).

Treatment

- Medical treatment:
 - Finasteride: 5- α -reductase type II inhibited
 - Minoxidil: increases the number of follicles in anagen, enlarges miniaturized hairs
- Surgical treatment: hair transplantation with minigrafts and micrografts

Note: finasteride for male but it's not performed in Yemen because of impotence side affect.

Minoxidil for females but it increases the hair in the face and other sites.

□ Alopecia, Scarring

Classification:

- **Primary:** hair follicle is the primary target of the immune attack, i.e., lichen planopilaris (LPP), folliculitis decalvans, and acne keloidalis
- **Secondary:** hair follicle is an innocent bystander which is nonspecifically affected by the inflammatory process, i.e., cutaneous sarcoidosis, burns, and chronic infections.

❑ Alopecia, Scarring

1. Pseudopelade of Brocq

- Idiopathic lymphocytic primary cicatricial alopecia that predominantly affects the scalp.
- Women between 30 and 50 years of age are most frequently affected
- Oval- or irregularly shaped atrophic patches which may be mistaken for alopecia areata with patches of hair growth, “**footprints in the snow.**”
- No scalp redness or perifollicular scale

- **Histology:** atrophy, perifollicular inflammation at the level of the infundibulum, fibrosis that extends in to the subcutis

Note: It's distinguished from Alopecia by the erythema. So we must know if the patient has used garlic or not, because that causes erythema.



FIGURE 1-12 Pseudopelade (of Brocq).

□ Alopecia, Scarring

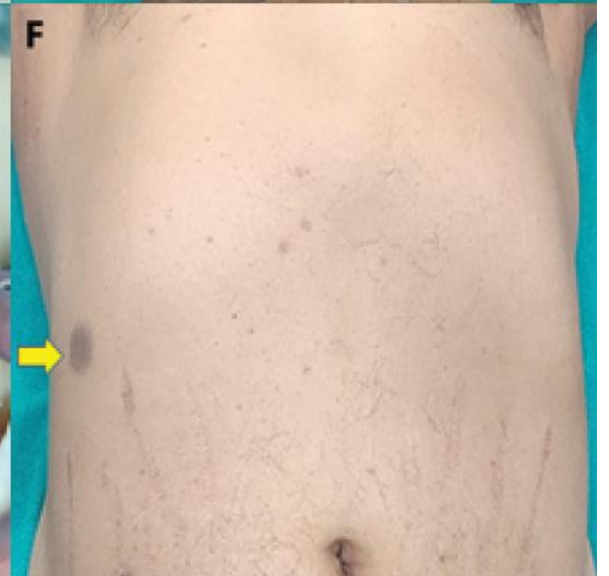
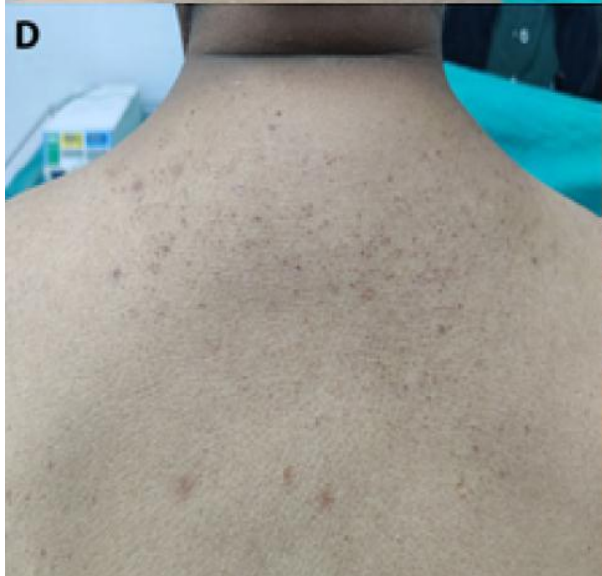
2. Lichen planopilaris (LPP)

- Perifollicular erythema and scale at the periphery of the patch of alopecia
- More than 50% associated with cutaneous or oral lichen planus
- Involves scalp alone or scalp and other hair-bearing areas ()



Graham Little syndrome

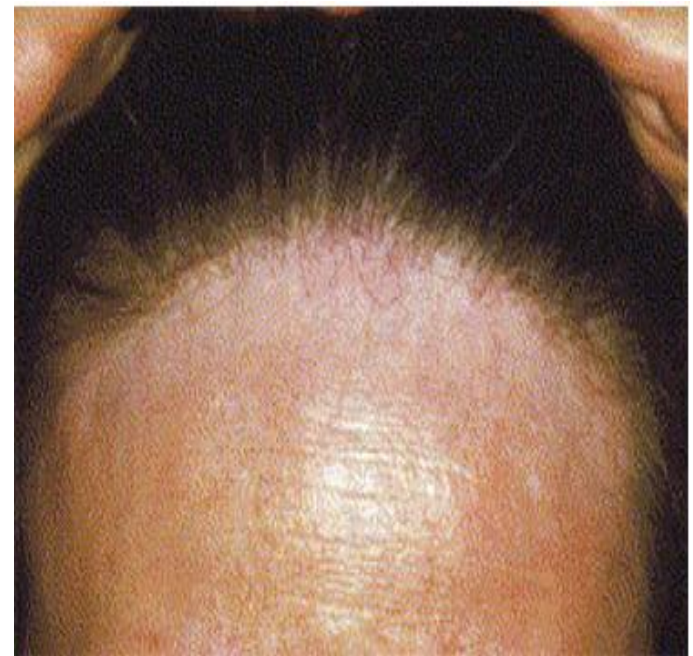
Patchy cicatricial alopecia of the scalp,
Non-cicatricial alopecia of the axilla and groin,
a follicular spinous papule on the body, scalp, or
both



- 
- **Histology:** typically same as LPP, may see lichenoid interface dermatitis of the superficial follicular epithelium

□ Alopecia, Scarring

3• Frontal fibrosing alopecia: frontotemporal hairline recession and eyebrow loss in postmenopausal women that is associated with perifollicular erythema and scaling, in a bandlike distribution along the frontotemporal hairline



□ Alopecia, Scarring

4. Lupus erythematosus

- Chronic cutaneous (discoid) lupus erythematosus : scarring alopecia, erythema, hypo- and hyperpigmentation of the scalp, dilated follicles plus keratin plugs, scaling at the center of the patch of alopecia



- 
- **Systemic lupus erythematosus:** diffuse, nonscarring alopecia; broken hairs in frontal region (“lupus hairs”)
 - Diagnostic biopsy and direct immunofluorescence
 - **Treatment:** topical, intralesional, or oral steroids; systemic retinoids; antimalarials

□ Alopecia, Scarring

4. Central centrifugal cicatricial alopecia (CCCA)

- Previously called follicular degeneration syndrome; hot-comb alopecia
- Follicular loss mainly on the crown of the scalp
- Possibly secondary to hair care practices

Note: it's a very rare disease that usually occurs in curly hair, so pt. usually uses hair straightener comb.

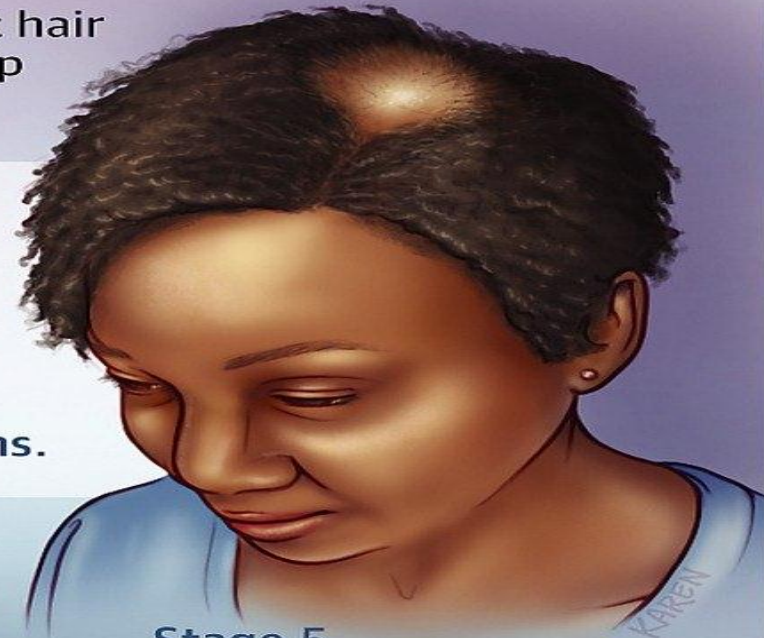


- **Histology:** premature desquamation of the inner root sheath, mononuclear infiltrate at the isthmus, loss of the follicular epithelium with fibrosis

Central centrifugal cicatricial alopecia (CCCA)

CCCA is a disease characterized by permanent hair loss that begins in the central crown of the scalp and widens over time.

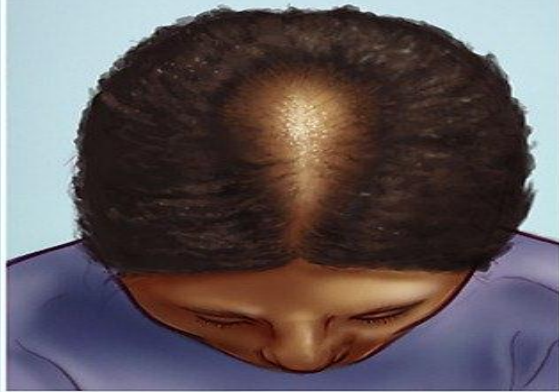
CCCA occurs almost exclusively in black women over the age of 30. Symptoms include burning, itching, tenderness, redness, scaling or flaking, and acne-like bumps on the scalp. Some people do not experience symptoms.



Typical progression of CCCA

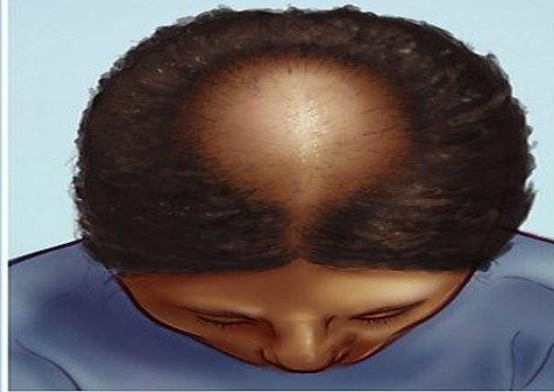
Stage 1

Subtle hair thinning in the central crown



Stage 3

Increased hair thinning with central scarring



Stage 5

Severe, permanent hair loss and scarring



Treatment of CCCA is dependent on the stage of disease and focuses on relieving symptoms, slowing or stopping hair loss, and promoting hair regrowth in areas that are not permanently scarred.

□ Alopecia, Scarring

5. Alopecia mucinosa (follicular mucinosis)

- Erythematous plaques or flat patches without hair
- Children: head and neck, benign, self-resolving
- Adults: more widespread distribution; may be associated with cutaneous T-cell lymphoma



- 
- **Histology:** mucin in the outer root sheath and sebaceous glands, perifollicular lymphohistiocytic infiltrate

□ Alopecia, Scarring

6. Dissecting cellulitis: Perifolliculitis capitis abscedens et suffodiens

- May be part of the follicular occlusion triad (cystic acne, hidradenitis, dissecting cellulitis)
- Fluctuant nodules on vertex, occiput, sterile pus
- **Histology:** sinus tracts, sterile abscesses
- **Treatment:** systemic steroids, systemic antibiotics, dapsons, retinoids, biologics, surgical excision

Note: How to differentiate between dissecting cellulitis and folliculitis decalvans?

Dissecting cellulitis have sinus tract, while folliculitis decalvans don't.



FIGURE 1-17 Dissecting cellulitis. (Used with permission from Dr. Paradi Mirmirani.)

Note: We must give steroid to decrease inflammatory process with antibiotic but it has to be for short duration.

□ Alopecia, Scarring

7. Folliculitis decalvans

- Scarring alopecia with crusting, pustules, and erosions
- Staphylococcus aureus usually cultured
- **Histology:** acute suppurative folliculitis with neutrophils and eosinophils; later mixed with lymphocytes and histiocytes
- Loss of sebaceous epithelium and perifollicular fibrosis

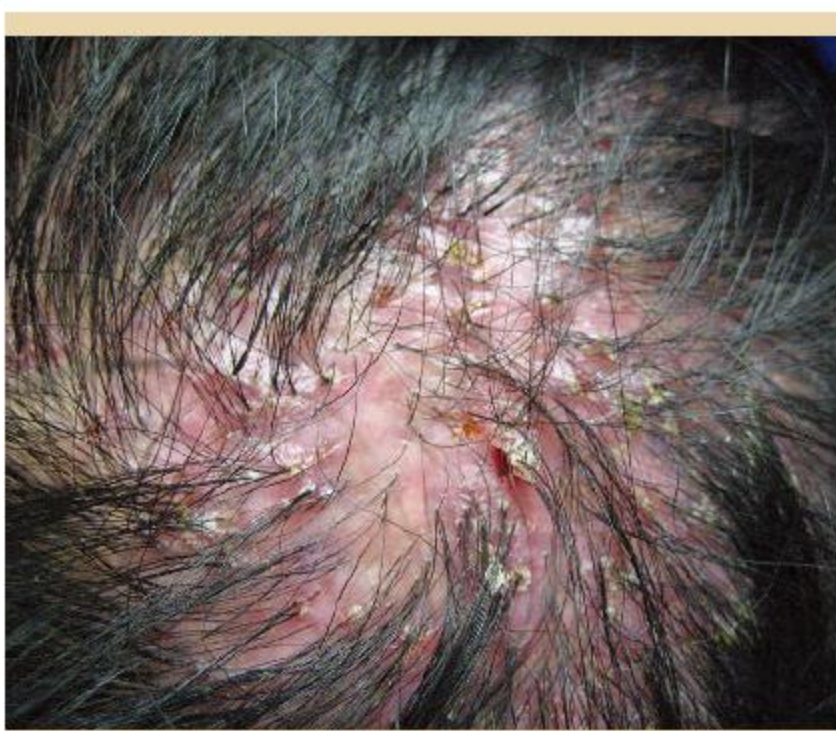


FIGURE 1-18 Folliculitis decalvans. (Used with permission from Dr. Paradi Mirmirani.)

.Treatment: staphylococcal eradication: systemic antibiotics with or without rifampin, systemic and/or topical steroids

□ Alopecia, Scarring

8. Acne keloidalis

- Follicular pustules and papules that progress to firm, keloidal papules
- Commonly on occiput of patients with coarse and/or curly hair
- Foreign-body reaction to trapped hair shaft fragments
- Often bacterial superinfection

Note: Acne Keloidalis— this always comes in the back of the shoulders



FIGURE 1-19 Acne keloidalis. (Used with permission from Dr. Adelaide Hebert.)



- **Histology:** follicular dilatation and mixed periinfundibular infiltrate with follicular rupture and foreign-body granulomas
- **Treatment:** systemic antibiotics, topical and/or intralesional steroids

Hypertrichosis and Hirsutism

- **Hypertrichosis** is defined as excessive hair growth anywhere on the body in either males or females. It is important to distinguish **hypertrichosis** from **hirsutism**, which is a term reserved for females who grow an excessive amount of terminal hairs in androgen-dependent sites.

Note:

Hypertrichosis vs. Hirsutism:

1. Hypertrichosis—results in increased hair all over the both.
2. Hairsutisim comes in androgen sensitive areas such as a females chin.
This may also be due to ovarian cyst. Pt. may also suffer form hair lost.

Hypertrichosis

- There are several ways of classifying hypertrichosis. These are based on the distribution (**generalized vs. localized**), the age of onset (**congenital versus acquired**), and the type of hair (**vellus versus terminal**).

Treatment and prognosis

- **Treatment**

Laser hair removal, depilatory creams

- **Prognosis** : depending on the type of hypertrichosis. Hypertrichosis associated with genetic syndromes is generally lifelong.

drug-induced hypertrichosis, it is usually reversible with discontinuation of the medication

Note:

Treatment is laser hair removal but before starting treatment must first do testosterone test for the female to ensure that it's levels are within normal, because if laser hair removal was done with high testosterone levels high the hair will return.

Hirsutism

Hirsutism is the growth of excessive male-pattern hair in women after puberty.

. It affects facial and body areas dependent on androgens, namely mustache and beard, pubic hair, buttocks, and thighs.

Note: Treatment: patients are given oral contraceptives. A dermatologist refers the patient to an OBGYN doctor to prescribe the oral contraceptives.

Treatment / Management

1 - Pharmacologic Treatment

Treatment of non-tumoral hirsutism still includes:

- oral contraception
- Spironolactone
- Finasteride

Treatment / Management

2- Non-Pharmacologic Treatment

- the cosmetic approaches that are also appropriate for hypertrichoses: shaving, hair removal lasers and various intense pulsed light devices.



THANKS!

For more Question feel free to contact me

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